Standards Advisory 9-15-00 – Proxy Performance Enhancements

4 Steps to improve upon the overall performance of Microsoft Proxy 2.0

Overview: As an effort to enhance the overall performance of Microsoft Proxy 2.0, specific modifications should be made to each Proxy Server within a local school district's configuration. This includes all Proxy Servers at both the school-level and district-level.

Step 1- Defragmentation **(Recommendation)**

The largest performance gain that will be achieved by tuning a proxy server is to defragment the proxy cache every night using defragmentation software for Windows NT 4.0. There are several third-party companies that have developed defragmentation software specifically for Windows NT 4.0. Please contact your KETS Regional Engineer for guidance in selecting a cost-effective package to address these needs.

Step 2- Modifications to Microsoft Proxy 2.0:

a) Choose <Start>, <Programs>, <Microsoft Proxy Server>, <Microsoft Management Console>.

b) Highlight **Web Proxy**, and choose "**Properties**":

c) In the proxy properties, under the 'caching' tab, set the radio button in the 'cache expiration policy' section to **'fewer network accesses are more important (more cache hits)'**.

d) In the proxy properties, under the 'caching' tab, set the radio button in the 'enable active caching' section to **'faster user response time is more important (more pre-fetching)'**.

e) In the proxy properties, under the 'caching' tab, after hitting the '**advanced**' button, set the following:

Return expired objects for up to **999%** of the original TTL if source web site cannot be contacted.
TTL = **999%** of object's age if source provides time last-modified.
Minimum TTL: **1440** min.
Maximum TTL: **7200** min.
FTP caching TTL: **7200** min.

Please note that by changing these settings to the values listed above, data will remain cached for long periods of time and it may be necessary to refresh the page in your browser to view the current contents if necessary.

Step 3 – Modification to the Windows NT 4.0 Registry:

a) Choose <Start>, <Run>, type **regedt32**, and click <OK>

b) Maximize the window titled **HKEY_LOCAL_MACHINE**

c) On the left pane, expand the **SYSTEM** folder

d) Expand the **CurrentControlSet** folder

e) Expand the **Services** folder

f) Scroll down and expand the **W3Proxy** folder

g) Still in the left pane, click on the **Parameters** folder

h) On the right pane, scroll down and locate the entries for:

DnsCacheSize
DnsTTLinSecs

i) Double-click the entry for **DnsCacheSize,** and a window titled **"DWORD Editor"** should appear.

j) Insure that the radio button for **Hex** is selected

k) Type **2710** in the data field, and click <OK>.

l) Double-click the entry for **DnsTTLinSecs,** and a window titled **"DWORD Editor"** should appear.

m) Insure that the radio button for **Hex** is selected

n) Type **15180** in the data field, and click <OK>.

o) Close and exit the Registry Editor

Step 4 – Modification to the Windows NT 4.0 Paging File Size:

a) From the Desktop, right-click on "My Computer", and choose **Properties**.

b) Click on the **Performance** tab

c) Under the section for Virtual Memory, click <**Change**>.

d) In the section titled '**Paging File Size for Selected Drive**", insure that initial size is set to same value as maximum size.

e) Click <**Set**>

f) Click <**OK**>

g) When prompted to restart the server, choose <**Yes**>.

Note: Reference Standards Document
http://www.kde.state.ky.us/oet/system/advisories/standards_advisory/standards%20032000_proxy_code_version.doc for full details on proxy code standards. Note that all code standards need to be in KETS compliance before applying the above.

All Standards advisories will be adopted as KETS technical standards in networking, proxy, and messaging. During the advisory period, comments can be sent to the KETS Security Advisory e-mail address at KETSStandardsAdvisory@kde.state.ky.us.

Standards Adoption Date: Adopted